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ABSTRACT

One major impact on the library service system of the management arts, the split between the traditional public service and technical departments, should be reconsidered. Technology such as photocopying, TWX, and long distance photocopying also has an impact on the service system. Data base service must be considered a routine biomedical reference tool to take full advantage of its potential. Through the use of educational technology in libraries, a new concept of the library role in curriculum affairs has evolved. Despite the mixed reviews of the impact of technology on library services, libraries should be encouraged to innovate. (Author/DS)

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SOME TECHNOLOGICAL IMPACTS ON LIBRARY SERVICE SYSTEMS

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ABSTRACT

This paper reviews some of the impacts upon the library service system including certain techniques of personnel deployment. It is suggested that there is service danger in the traditional Public Service/Technical Service split (an alternative is suggested); that outreach programs may finally relate information services to real information needs; that data base services must be considered a "routine" biomedical reference tool to take full advantage of its potential; that photocopy, TWX and long distance photocopy have had mixed impacts upon library service and that the use of educational technology in libraries is resulting in a new awareness of the library's role in curricular affairs. Despite the mixed review of the impacts of technology on library service in the last 15 years, librarians are encouraged to continue to innovate.

SOME TECHNOLOGICAL IMPACTS ON THE LIBRARY SERVICE SYSTEM

With such a pretentious title, some definitions and limitations are in order. For our purposes, technology is defined as "the practical arts generally," courtesy of my photographically reduced copy of the OED. This should be understood to include certain management arts such as the deployment and use of personnel. The phrase "Library Service System" is intended to distinguish between the often held concept of a library split into Public Service and Technical Service units and the concept of a library as an integrated set of functions with service to a given patron population as the single most important goal.

The management arts have very significant impacts upon the library and its quality of service and should capture our attention first. The Public Service - Technical Service split is most often seen in the larger library, while smaller libraries come closer to the integrated "Library Service System" concept. Too often, growing libraries leap for the bifurcated organizational structure and believe they have arrived when it is finally established. The last fifteen years have been a period of substantial growth in health science libraries generally. Many formerly small libraries in which every staff member had some responsibility for service to the public, have now split their organizations into mission oriented units in which some staff have no direct responsibility for service to the public. I suggest that, for the most part, the impact of these changes has been detrimental to library service. In a hypothetical situation, where once a staff of five served a population of 2,000, or one librarian per 400 patrons, there now is a staff of 12 serving a population of 6,000. But, where each of the original five devoted some part of their time to public service (maybe approaching 3 FTEs), there are now six devoted to public service. This appears to be only a slight degradation in the staff to patron ratio until you note that the population served has tripled, resulting in a ratio of one librarian per 1,000 patrons. Unless very carefully managed, it is possible to grow into a situation in which less service is rendered rather than more.

Larger organizations, required by heavy service loads and institutional mission, need not result in degraded service. As a possible alternative to the by now traditional Public Service - Technical Service organization, why not consider an organization that emphasizes service to the public in each of its major organizational sub-structures, for example an Access/Support Services unit and an Education/Research Services unit. The specific terminology is unimportant. But, this organization places similar management problem configurations together - Access/Support Services, (including Circulation, Acquisitions, and General Support Services) can be managed as production oriented units. Education/Research Services (including Reference, Cataloging and an Outreach unit) though not without production aspects, can be managed to maximize the impact of professional talent on the population served by the library. The overall result is to imbue both groups with objectives revolving around information service to the public.

The Outreach section included in the Education/Research Services unit is symptomatic of another impact that the management arts appear to be having on our health science library service systems. The Clinical Medical Librarian projects which we have seen develop over the course of the last few years began as a response to an innovative medical education curriculum. Occurring in the same time frame has been the increasing realization that the educational resource that we call a library must be marshalled more effectively to truely serve the needs of medical educators and students and that this could not be accomplished by our historical "Come see us, we'll help you" attitudes. The awareness of the library's responsibility to interact with its patron population outside the walls of the library is spreading rapidly. There are some very determined efforts by medical librarians to identify the information needs of health scientists - efforts that may dictate a change in the way Reference services are rendered and the variety of services that are offered. The basic question that is being

explored is whether the services presently offered by medical libraries are responding to the actual information needs of our patron population or to information needs that librarians have perceived but which are not congruent with actual patron needs. The Clinical Medical Librarian program is an aggressive step in the right direction, but the trail is more than one step long! We also serve dental education, allied health education, pharmacy, nursing, and public health education to say nothing of the basic scientists.

If the intent of this paper had been to dwell on management impacts on the Library Service System, then that would have been a more appropriate title. However, the scope is considerably broader. What about other technologies and their impacts? Should we start with the development of paper? the printing press? the typewriter? where? The last 15 years offer an interesting sample of technological impacts upon libraries.

Consider the Hollerith punched card. Its history far exceeds 15 years- even in libraries - having been used at The University of Texas in 1936 for a circulation system. However, a long series of developments from the Hollerith card and associated principles have resulted in information systems that we would not have recognized 15 years ago; systems like MEDLARS, MEDLINE, SERLINE, CATLINE, TOXLINE, the data bases supported by the SUNY system or available through Systems Development Corporation (SDC) or Lockheed. These changes have come fast. Do you remember when MEDLARS training required six months of training at NLM? It is likely that future on-line data base search training will be assigned to library schools as part of the curriculum (hopefully, required courses). The development of data base services has changed the way libraries serve their patrons. Searches that required laborious hand work can now be done by machine in a fraction of the time and with far greater precision because of the multitude of access points for any item in the data base and their combination in searching, all made possible by machine processing. No data base covers all the literature -

neither did any printed index. A "total" literature search still requires laborious hand work but the machine systems do reduce the amount of that hand work.

The manner in which manpower is deployed and utilized in the Reference department has been affected by the availability of data base services. There are those libraries that consider data base services so specialized that only a portion of the reference staff is trained in machine searching. This is changing as it surely must. Data bases are here to stay. They are probably the most powerful reference tools we have available. If every medical reference librarian on your staff isn't capable of machine searching, you are placing an undue service load on those who can, and at the same time, crippling the quality of service that the untrained reference staff member can render. This is not to say that one staff member should not be particularly well trained and responsible for the continuing data base education of the other reference personnel.

Though the computer has had other impacts of a substantial nature and, more are to come, there are several other technological changes to consider. Photocopy services in libraries have been with us for less than 15 years. There are few medical libraries in the country that do not provide their users with some form of photocopy service - either mediated or coin-operated and even, in some more affluent circumstances, cost free to the user. The Supreme Court left the copyright-photocopy door open for a while longer. Librarians and publishers have played games with one another and no mutual consensus has been reached at this writing. The legislation presently before Congress will change our service patterns as they relate to photocopy. We will be proscribed from running a photocopy service - even for our patrons because it would be "systematic." But, we will at least still be able to provide photocopy equipment. We may even have the privilege of continuing our systematic copying if we keep appropriate records or pay license fees.

What has been the impact of readily available photocopy? There have been several not just one. For instance, the circulation of bound journals has declined significantly. Some libraries severely limit journal circulation once inexpensive and adequate photocopy facilities are provided. Photocopy has facilitated the easy accumulation of huge "reprint" files by faculty and research staff. Photocopy has also resulted in increased wear and tear on bindings thus increasing collection preservation costs. Some libraries charge slightly higher photocopy fees than necessary to recover photocopy costs and use the surplus to finance the additional preservation costs.

The TWX unit was not widely used in libraries 15 years ago. Today, nearly every major library uses TWX for interlibrary communication, particularly, for interlibrary loan transactions. The impact of this was initially speedier receipt of materials from other libraries - a decided service to time pressured patrons. The U.S. Mail has somehow compromised the increased speed of access that TWX originally provided. Recently mail response times have become so bad in some areas that UPS (United Parcel Service) has been selected for some emerging library networks.

LDX - Long Distance Xerography - we should probably say LDP - long distance photocopy has been a disappointment so far because of high costs. Line costs for TWX, telephone, data base services and CAI are rising. There seems to be little hope of a near term reduction in LDP costs. But, possibilities do exist - electronic data packing, satellite communications - to name two developments that may allow long distance photocopy to become a more common reality.

Educational technology is presently having a tremendous impact on the library service system. It is expanding the information options from print to the wide variety of non-print formats. It is requiring new methods of bibliographic control. It is requiring a portion of scarce fiscal resources. It is requiring new types of staff - maintenance people particularly. It requires large chunks of space and new pieces of equipment. It is forcing new awarenesses upon librarians

relative to the various formats, equipments, and the library's responsibility to the support of curricular activities. Educational technology is exciting; it is costly; and in most institutions, it is becoming a required part of the library service system. As far as patrons are concerned, media provide a range of options to both teacher and student. In certain cases, for instance computer assisted instruction, the learner is given the option of making mistakes that minimize his ego depression, while the teacher is relieved of certain repetitive and time oriented student demands.

Fifteen years have resulted in far more changes than these, some maybe more significant (for instance, higher budgets - now somewhat diminished by inflation, etc.).

A legitimate question is "Why the changes?" and often the response can be "To improve service." But, there are other responses too - some not so palatable to those who made the decisions. They include: "institutional prestige" and "to justify someone else's computer." With our increasingly scarce fiscal resources, let us pledge that all our future technological additions or changes will be rationally attributed to improved service.

The Weinberg report provides a most useful guide for every librarian when faced with potential changes and their impacts on the library service system.

"Mistakes, some of them costly, will occur. Yet to do nothing new is perhaps the worst mistake . . . ."[1]

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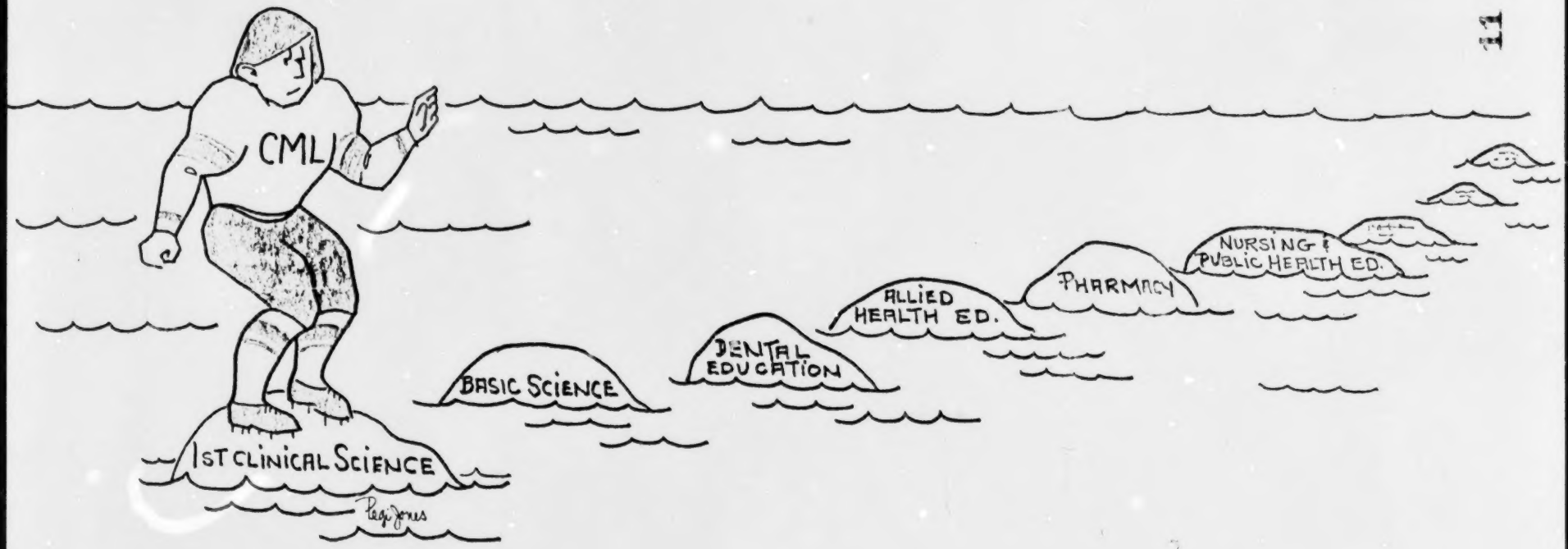

Fig. 1. C. Lee Jones

GUESS WHO OUR DATA BASE SEARCHERS ARE ?

Fig. 2. C. Lee Jones

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